

ABSTRACT

Sand casting is an old art. In this molding process sand is compacted around a pattern and the pattern is removed, leaving a mold cavity the shape of the pattern. Molten metal can then be poured into the cavity to form the object. To increase the life of the mold, and to make removal of the pattern easier, the pattern must be coated with a protective material. Despite many available pattern coating compounds, mineral seal oil, and a mixture of mineral seal and clay, have been the commercial choices. Hereby the advantages of mineral seal oil-clay pattern coating compositions are retained without its detriments by utilizing a vegetable oil base in a pattern coating composition to replace some or all of the mineral seal oil to provide biodegradable coating compositions with reduced VOC content.

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